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(84) Designated Contracting States: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR Designated Extension States: AL LT LV MK RO SI	(72) Inventors: - Willis, Donald Henry Indianapolis, IN 46250 (US) - Hague, John Alan Indianapolis, IN 46220 (US)
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(54)

Reducing sparkle artifacts with low brightness filtering

(57) A video signal (INPUT X) is decomposed into a higher brightness level signal (HIGH) and a lower brightness level signal (LOW). The threshold (T) between higher and lower brightness levels is adjustable and related to the transition between lower and higher gain portions of the gamma table for an associated liquid crystal imager. The lower brightness level signal is low pass filtered (in 22) to reduce the difference in brightness between adjacent pixels. The higher brightness

level signal is delayed in time (in 24) to match the processing delay through the low pass filter. The delay matched signal and the low pass filtered signal are combined (in 26) to form a modified video signal (OUTPUT X') less likely to result in sparkle artifacts in the imager. Sparkle reduction processing can be applied to luminance signals and to video drive signals in various combinations, based on independently selectable thresholds (Fig. 4).

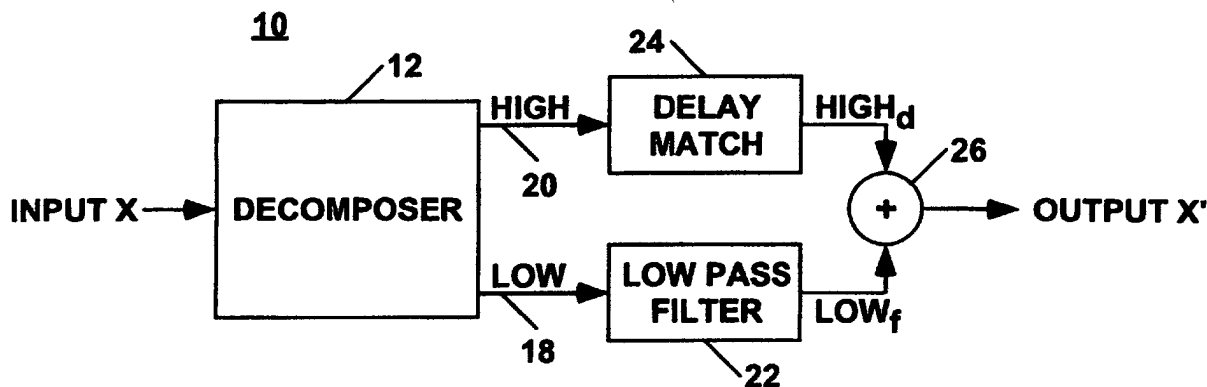


FIG. 1



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Office

EUROPEAN SEARCH REPORT

Application Number
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 14 January 2005	Examiner Gundlach, H
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

2
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